EMISSION REDUCTION TRADING LEGAL ISSUES

OUTCOMES FROM CLIMATE CHANGE CENTRAL'S GREENHOUSE GAS EMISSION REDUCTION TRADING WORKSHOP

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g e r t

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TABLE OF CONTENTS

			Page
A.		**INTRODUCTION**	**1**
B.		**KEY ISSUES**	**2**
	1.	Commodity	2
	2.	Title	2
	3.	Verification	2
	4.	Global Warming Potential	3
	5.	Surplus	4
	6.	Force Majeure	4
	7.	Vintage	5
	8.	International Requirements	5
	9.	Creditworthiness	6
	10.	Remedies	7
	11.	Permanence	7
	12.	Taxes	8
C.		**PROJECT NEGOTIATIONS**	**8**
	1.	Landfill Gas Offset Project	8
		a. Commodity	8
		b. Title / Ownership	9
		c. Verification	10
		d. Global Warming Potential	10
		e. Force Majeure	11
		f. Vintage	11
	2.	CDM Project	11
		a. Commodity	12
		b. Title / Ownership	12
		c. Verification	13
		d. Force Majeure	13
		e. International Requirements	13
	3.	Domestic Agriculture Project	13
		a. Title / Ownership	14
		b. Surplus / Vintage / Permanence	14
D.		**CONCLUSION**	**16**

Schedule "A" -- Term Sheet (Morning Session)
Schedule "B" -- Term Sheet #1 (Afternoon Session)
Schedule "C" -- Term Sheet #2 (Afternoon Session)

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By: Ron Ezekiel & Jason Harris, Fasken Martineau[1]

A. Introduction

On February 21, 2002, in Calgary, Alberta, Climate Change Central sponsored "Negotiating an Emissions Trade", a workshop on greenhouse gas (GHG) emission reduction trading transactions. The aim of the workshop was to address some of the key issues that arise in the course of negotiating a GHG emission reduction trade.

Participants were divided into teams of buyers and sellers. Each team was lead by a "team leader" -- an individual with actual transactional experience buying or selling GHG emission reductions. Lawyers, brokers and others with significant emission reduction trading experience or involved in the development of emission reduction trading systems were also present and acted as facilitators throughout the day.

Each team was involved in two contract negotiations, one in the morning and one in the afternoon. Each negotiation session was centred around a prepared mock term sheet for participants to work through. In the morning, all participants worked from the same term sheet, a copy of which is attached as Schedule "A". Two different term sheets were presented in the afternoon, copies of which are attached as Schedules "B" and "C", with four teams focussing on the Schedule "B" term sheet, and two teams focussing on the Schedule "C" term sheet.

Each negotiating session began with a strategy session where individual buyer and seller teams caucussed to discuss issues raised by the relevant term sheet, and to formulate strategy on how to address or resolve those issues in the course of negotiations. Strategy sessions were followed by actual negotiation sessions, where individual buyer teams were matched with individual seller teams. These groups then undertook the challenge of negotiating the transaction, including resolutions to any identified issues, with the assistance of the team leaders and facilitators.

At the end of each negotiation, all participants were drawn back together in a plenary session to report on and discuss their negotiations, any identified issues and their resolutions, if any were achieved. Although the teams were negotiating contractual issues, they were not asked to settle

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on actual contract language. Time contraints prohibited this level of detail, and in general the aim of the workshop was to discuss key emission reduction trading issues in an attempt to find common ground between buyers and sellers.

B. Key Issues

Participants were provided with information on the key issues to be negotiated during the workshop. A brief summary of each issue is included below. This by no means constitutes an exhaustive list of the issues which may arise in the course of a GHG emission reduction trade. Even some material issues, such as additionality, are not included as they were beyond the scope of the workshop.

1. Commodity

As part of any purchase and sale transaction the parties must agree on what is being bought and sold. In an emission reduction trading transaction the parties often talk about buying and selling emission reductions as if the reductions were a tradable commodity. This is incorrect. An emission reduction is an event, not a commodity. The buyer is really interested in buying any benefits that may arise from the emission reductions. Of course, the existence of these benefits depends on, among other things, the seller achieving the emission reductions in the first instance, so the buyer is often equally interested in the seller's implementation of the reduction activities.

2. Title

A buyer cannot buy what the seller does not own. Over the years many systems have been created to eliminate or minimize this ownership related risk. For example land title registries were created to document interests in land to provide a buyer with greater assurance that the seller in fact owned the land being offered for sale. In theory, this additional assurance makes the land more valuable.

No such systems exist for GHG emission reductions. As a result, the buyer must satisfy itself through independent investigation and assurances from the seller that the seller in fact owns the emission reductions and the benefits that might be associated with those reductions that are being offered for sale.

3. Verification

The emission reductions claimed by the seller must be defined according to currently available scientific principles in a "protocol." The protocol sets out the specifications and methodologies by which GHG emission reductions will be measured, and is a critical element in any emission reduction trade. The appropriate protocol may be determined by international or domestic legislation in the future, once verification rules are developed under the *Kyoto Protocol* or federal or provincial law. However, until there is an applicable legislated verification protocol, buyers and sellers must formulate and agree upon their own verification protocol.

Although the science of the verification protocol is one of the key elements of a GHG emission reduction trade, discussing the scientific merits of verification protocols was beyond the scope of the workshop. Instead, several other key aspects of verification were discussed. For example:

- Who should be conducting the verification -- buyer, seller or an independent third party?
- Who should pay the costs of verification?
- How often should verification be done?
- In the event that information necessary to verify the emission reductions is in the possession of parties other than the buyer and seller, who is responsible for obtaining access to that information?
- In the event that an applicable legislated verification protocol is developed in the future, can the buyer require the emission reductions to be verified in accordance with the new protocol? If so, who is to bear any incremental costs?

4. Global Warming Potential

Carbon dioxide is not the only greenhouse gas. Five other gases or families of gases -- methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride -- are covered by the *Kyoto Protocol*. The global warming effect of each of these gases in the atmosphere is different. For example, an amount of methane is generally believed to have 21 times the global warming effect of an equivalent amount of carbon dioxide. These multipliers in relation to carbon dioxide are generally referred to as the global warming potential (GWP) of the gas. There is a possibility that these GWPs may change over time, as continued scientific research better determines the relative global warming effects of these gases.

As a result, a significant issue arises in the course of an emission reduction trade involving a GHG other than carbon dioxide. For example, in a trade involving a reduction of methane, the parties can either agree to purchase and sell any benefits associated with a certain quantity of methane reductions, or alternatively, a certain quantity of carbon dioxide "equivalent" (CO2e) emission reductions. The latter means the parties have agreed to apply a GWP multiplier to the methane emissions in order to transact in a uniform commodity -- CO2e emission reductions.

The implication of electing to transact methane emission reductions or CO2e emission reductions becomes clear in the event that the GWP of methane is revised after the deal is struck, but before delivery is made. If the GWP of methane is increased, the seller may deliver the required quantity of CO2e emission reductions with a smaller volume of methane emission reductions. Conversely, if the GWP of methane is decreased, an increased volume of methane emission reductions will be necessary to deliver the required quantity of CO2e emission reductions. This only occurs, however, if the parties have agreed that the multiplier, like a currency exchange

rate, floats. The parties may instead choose to fix the multiplier in their agreement. However, a change in the multiplier then results in either the seller or buyer obtaining a potential windfall, since the emission reductions to be delivered pursuant to the agreement will either provide the buyer with more or fewer CO2e emission reductions than what the parties had thought their deal entailed. By contrast, if the parties had agreed to deliver methane emission reductions, and not CO2e emission reductions, no change would be required. As before, however, this could result in either the buyer or seller obtaining a windfall, since the buyer may end up with more or fewer CO2e emission reductions than what the parties had contemplated.

As a result, defining whether emission reductions are to be in CO2e or some other GHG is a key element of a GHG emission reduction trade. What is to happen in the event that a relevant GWP is changed should also be considered, together with the issue of what must occur before the parties agree to recognize a GWP change (i.e. legislation is enacted specifying a GWP, a decision from the IPCC changes a GWP, etc.).

5. Surplus

Surplus (also sometimes referred to as regulatory additionality) refers to whether or not the emission reductions in question are otherwise required by law. If the emission reductions are not required by law, they are said to be surplus. The most common surplus issue that arises between buyer and seller is whether the emission reductions to be purchased should be surplus at the time the emission reduction trade is executed by the parties, or surplus in the year that the emission reductions are generated.

From the buyer's perspective an emission reduction which is not surplus in the year of generation carries with it a risk that it may never be recognized. This occurs because it is unlikely that emission reductions which are required by law will yield some benefit to the buyer, since that would defeat the intention of any legislation aimed at reducing GHG emissions. From the seller's perspective, emission reductions that are surplus in the year of generation means the seller must bear the risk of changing regulations -- a risk which is completely out of the seller's control and difficult to quantify or manage.

6. Force Majeure

Force majeure refers to a legal provision that generally permits a party to avoid or delay performance of its part of a contract upon the occurrence of an event that is beyond that party's control. Common examples of such events include lightning, earthquakes, wars, riots, etc., but occasionally force majeure clauses extend beyond these so called "acts of god" to include any act beyond the reasonable control of a party. This could permit parties to avoid or delay performance because of market conditions, supplier problems, legislative changes or other events which the parties may not have intended to constitute force majeure.

7. Vintage

Vintage refers to tying an emission reduction to a particular year. As the *Kyoto Protocol* and many of the limited number of domestic GHG regulation programs around the world commonly require certain GHG emission reductions to be achieved during a particular period, emission reductions are often assigned a "vintage" in order to identify the year in which the emission reduction occurred. For example, if a tonne of GHG is reduced or removed in 2003, that tonne would be a 2003 "vintage" tonne. Vintage will also be an important characteristic of emission reductions if rules limiting bankability are imposed. In that event, tonnes with certain vintages may only be used for compliance purposes during certain years, beyond which they expire and can no longer be used.

8. International Requirements

If an emission reduction transaction is being undertaken across borders in the hopes of qualifying that transaction for treatment as a Joint Implementation (JI) or Clean Development Mechanism (CDM) trade under the *Kyoto Protocol*, additional issues may arise. Some of these issues have already been identified and resolved, in whole or in part, in the course of international negotiations, but likely many more have yet to be identified. How the parties agree to address these issues and those that have yet to be identified is a critical element to an international GHG emission reduction trade.

For example, in order to secure Certified Emission Reductions (CERs) for a CDM project, proponents must follow the procedural requirements prescribed by the *Kyoto Protocol*.

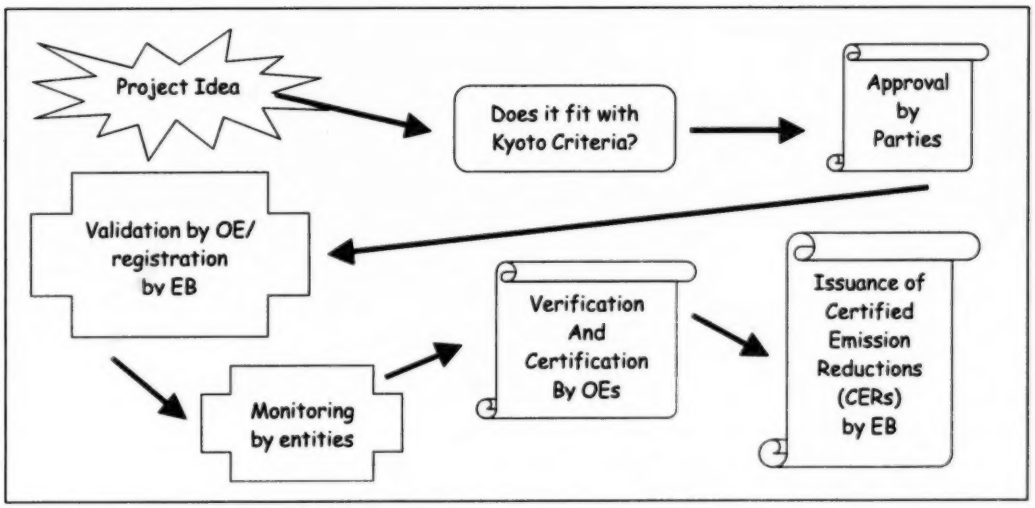
Project Idea
Does it fit with Kyoto Criteria?
Approval by Parties
Validation by OE/ registration by EB
Verification And Certification By OEs
Issuance of Certified Emission Reductions (CERs) by EB
Monitoring by entities

Diagram 1: CDM Project Cycle, Canada's CDM & JI Office, Department of Foreign Affairs and International Trade

As part of these requirements, the proponents must prepare, likely in consultation with an expert approved by the CDM executive board (Operational Entity), a project design document. The Operational Entity must then validate the project described in the project design document. During the validation process, the Operational Entity must consider whether all of the CDM requirements have been met, including whether an appropriate environmental assessment of the project was done, whether public comment was sufficiently invited and considered in the course of the assessment, and whether the host country has provided its approval of the project. After validation, the project is submitted to the CDM executive board for registration. Once registered, an Operational Entity must verify whether the projected emission reductions actually occur. If they are verified, an application may be made to the CDM executive board for certification of the emission reductions, and if approved, CERs will be issued subject to:

- the possibility that a private sector buyer may not be able to receive the CERs if the Annex I country that authorized it to trade CERs is not itself eligible to trade CERs at that time; and

- the CDM executive board withholding 2% of the CERs for the adaptation levy.

These requirements present additional issues that the parties to a CDM trade should consider, including the following:

- Who is responsible for satisfying the CDM procedural requirements?

- Who will pay the cost of satisfying the CDM procedural requirements?

- What happens if the buyer is not able to receive the CERs because the Annex I country that authorized the buyer to trade CERs is ineligible to trade CERs at the time of delivery?

- Will the buyer have to pay for the CERs used for the adaptation levy?

9. Creditworthiness

Creditworthiness is an important issue that arises during the negotiation of any long term purchase and sale contract where performance of the seller's obligation to deliver and the buyer's obligation to pay is not to occur for many years. In many GHG emission reduction trades buyers may prefer delivery of emission reductions between 2008-2012 -- the first budget period under the *Kyoto Protocol*. This exposes both seller and buyer to the risk that the other party's financial condition may deteriorate over the intervening period so that it cannot perform its obligations as required under the contract in the future.

10. Remedies

Courses of action available to a party in the event the other party breaches an agreement is also an element to consider in an emission reduction trade. For example, in long term emission reduction trades, the return by the seller of a down payment made by the buyer if the seller is unable to perform its obligations may not adequately compensate the buyer. The market value of the emission reductions sought by the buyer may have increased since the contract was first entered into with the seller, and it may cost the buyer significantly more to purchase an equivalent volume of emission reductions at the time of the seller's breach.

11. Permanence

Permanence generally arises in discussions relating to carbon sink transactions, but it can be an issue in all GHG transactions.

In carbon sink transactions, the buyer is generally paying the seller for removing GHG from the atmosphere and appropriately sequestering it geologically, or in either soil or forest biomass. Payment is usually made once the removal and sequestration of the GHG can be verified. But what happens if the greenhouse gas is later released back into the atmosphere? For example, what happens if a forest fire results in the release of carbon sequestered in the trees (and possibly already paid for by the buyer)?

In some respects, carbon sink transactions can be viewed as emission deferrals, where GHG is removed and sequestered for an uncertain period of time. If the removal is not permanent, the global warming benefit achieved through the sink may one day disappear. In other words, at some future date, there may be just as much GHG in the atmosphere as if the carbon sink transaction had never occurred. In the end result, all that may have been achieved is a temporary period during which there was less GHG in the atmoshphere. The challenge for the parties is if the sequestered GHG is ultimately released, is the buyer or seller responsible for the resulting emissions or for replacing the GHG removals?

A different kind of permanency debate can arise in any emission reduction transaction -- a debate over whether emissions from the GHG source have been permanently reduced. For example, in a landfill gas recovery project, methane captured and flared between 2004 and 2008 will result in emission reductions as methane (with a high GWP) is converted to carbon dioxide (with a lower GWP). Those emission reductions are permanent for purposes of the earlier discussion, since there is no immedate risk that the carbon dioxide will be converted back to methane, effectively eliminating any benefit from the emission reduction.

However, there is nothing which prevents an end to the flaring operation in 2009. In that context, there is no guarantee that the source's future emissions will be reduced or eliminated since the landfill could revert to emitting methane in 2009. But that is quite different than the permanence question discussed above, because even if the landfill reverts to emitting methane in 2009, the emission reductions achieved between 2004 and 2008 will continue to exist. This

permanency issue -- whether there is a guarantee that a source's future emissions will be reduced or eliminated -- should not be confused with the question of whether a removal of GHG from the atmosphere through a carbon sink yields a permanent reduction in the amount of GHG in the atmosphere.

12. Taxes

The tax treatment of emission reduction trades is unknown at this time. The applicability of sales taxes, (like PST , GST and HST) remains uncertain. Buyers and sellers may want to decide on who will pay any applicable taxes in the future, so the parties can account for these costs in the transaction.

C. Project Negotiations

What follows is a summary of how many of the issues discussed above were presented in the term sheets used by the workshop participants, and the results of the negotiations undertaken between buyers and sellers in order to try and resolve those issues. Not all of the issues discussed above or raised in the term sheets were addressed by the participants due to time constraints. However many of the issues were debated, and the participants in general achieved mixed success in arriving at workable solutions between buyers and sellers.

1. Landfill Gas Offset Project

The morning negotiation session involved a landfill gas recovery project. In general, when organic material in landfills decomposes in the absence of oxygen, methane gas is produced, which is often permitted to escape to the atmosphere.

The project involved a Canadian private landfill operator installing capital equipment at a Canadian landfill to capture and dry landfill gas that was previously vented to the atmosphere. A nearby pulp mill was to use a significant amount of the gas for drying. The landfill operator was to build a 1 kilometre pipeline to the pulp mill and sell the landfill gas to the pulp mill for use in its drying process. The process change made possible by the capital additions was expected to yield a reduction of 100,000 tonnes CO2e per year for 10 years.

The term sheet had the landfill operator offering to sell half of the potential emission reductions to the mill as follows: an average of 50,000 vintage 2002 through 2012 tonnes CO2e were to be delivered, with at least 25,000 tonnes of every vintage and no more that 100,000 tonnes of any vintage.

a. *Commodity*

The term sheet describes the transaction as being a purchase and sale of emission reductions. Most groups recognized that the buyer was primarily interested in any benefits that might arise

from the emission reductions and agreed that the commodity to be transacted would include any potential benefits.

b. *Title / Ownership*

Most of the groups had concerns about the existence of other possible claims to the benefits arising out of the emission reductions being offered for sale. Possible claimants included other landowners, as the term sheet did not indicate whether the pulp mill operator also owned the pulp mill land, or whether the 1 km pipeline traversed property not owned by either the buyer or seller. The manufacturers of the landfill gas drying equipment, the pipeline and other materials used in the project were also identified as a potential competing claimant, as were potential lenders responsible for financing the project.

The parties generally dealt with the possibility of competing claims by contemplating an agreement with potential competitors to address ownership issues. For some negotiating groups, the responsibility to obtain such an agreement was the responsibility of the seller, while other groups agreed that both buyer and seller should bear that burden. With some groups, such an agreement from each potential competitor was a condition precedent to the agreement between buyer and seller.

The term sheet also left unanswered the question of the arrangement between the landfill gas operator and the pulp mill operator as to the supply of landfill gas to the pulp mill. Some groups took the position that this was the subject matter of a separate agreement that had already been settled between the parties, while others took the position that this agreement had yet to be settled.

For some of those groups accepting that the landfill gas supply agreement had already been settled, a significant additional title issue arose -- the pulp mill operator claimed that it, and not the landfill operator, was responsible for the emission reductions. Because the landfill operator was already obligated to deliver the landfill gas to the pulp mill, it had no claim to the emission reductions. Instead it was the pulp mill operator, who was to burn the landfill gas and convert it from methane to carbon dioxide before venting it to the atmosphere, that was responsible for and had title to the resulting emission reductions.

For the other groups, the landfill operator was largely able to defend against this competing claim by taking the position that it could merely flare the landfill gas at the landfill site and then sell the resulting emission reductions to a third party.

This surprising result underscores the important link between GHG related commodities and the emission liabilities or benefits associated with their use. If the benefits arising from emission reductions are not dealt with at the same time as or in the very agreements dealing with the GHG related commodites that give rise to them, it may prove difficult for either party to sever the emission reduction benefits from the GHG commodity. If title to the emission reduction benefits remains unclear, competing claims may exist, and neither party may be able to appropriately

sever the benefits from the commodity in order to have a distinct and marketable emission reduction commodity.

There was also some concern raised by some groups as to the possibility that the seller might go about selling the same emission reductions to more than one buyer. Some parties sought to address this by limiting the seller's ability to sell emission reductions resulting from the combustion of the landfill gas to other parties.

c. *Verification*

The majority of the groups discussed who should verify, with most agreeing that a qualified independent verifier should conduct the verification. Some groups agreed that the seller would select the qualified independent verifier from a government list (assuming one was ever developed) or the parties would agree upon the verifier from time to time in the future. Other groups could not agree.

Some groups agreed that verification costs should be borne by the seller, while others agreed they should be borne by the buyer, or shared between buyer and seller in some way. At least one group agreed to deal with costs by adjusting the price of the emission reductions in the future once verification costs could be determined.

There was limited discussion on verification timing. Some groups did not deal with it at all, while others canvassed the possibility of verifying every two years instead of annually to reduce verification costs.

Some groups discussed the need to access the pulp mill, and information relating to the combustion of the landfill gas at the pulp mill in order to verify the emission reductions. In some groups where the seller was obligated to verify, the seller asked for access rights to the pulp mill for itself and the third party verifier in order to collect the necessary information.

There was little discussion on what was to occur in the event a legislated verification protocol was imposed in the future which was different than the one agreed to between the parties. In general, most groups agreed that some flexibility in the agreement was required so that the new legislated protocol could be used, but few groups reached agreement on how this should be done. One groups agreed that any incremental costs of using the new protocol should be shared between the parties.

d. *Global Warming Potential*

Each group of buyers and sellers discussed whether the commodity being bought and sold was reductions in emissions of methane or CO2e. As discussed above, there is a possibility that the GWP of methane may be changed in the future. This uncertainty resulted in discussions about how to best manage this GWP conversion risk over the life of the agreement.

This issue was settled, if at all, in various ways. Some groups agreed that CO2e emission reductions were to be delivered based on whatever the applicable GWP was at the time of delivery, with the seller bearing the risk of a reduction in the GWP of methane. Others agreed to fix the GWP at 21 (its current accepted value), with each of the buyer and seller bearing some of the risk depending on whether the GWP was increased or decreased. Still other groups agreed that deliveries were to be in methane emission reductions, avoiding the GWP issue altogether.

e. *Force Majeure*

Most parties generally agreed to a force majeure provision that permitted a party to delay performance in the event of an act of God (i.e. earthquakes, fire, etc.). Many buyers and sellers, however, were reluctant to agree to a broader force majeure provision which could have permitted parties to delay performance in other circumstances. For example, the seller did not want to accept the risk that the pulp mill might be able to avoid or delay performance (and in particular avoid obligation to combust the methane to convert it to carbon dioxide) in the event that the market price of pulp required the pulp mill to shut down. Similarly, the pulp mill did not want to accept the risk that the landfill operator might be able to delay performance because of equipment failures due to poor maintenance at the landfill site.

f. *Vintage*

A real disparity between the buyers and sellers arose with respect to vintage. Buyers, anxious to receive emission reductions with 2008-2012 vintages corresponding to the first budget period of the *Kyoto Protocol*, sought to restrict the seller's ability to deliver pre-2008 vintage tonnes. Conversely, sellers, recognizing that the value of 2008-2012 vintage tonnes carried a premium, were anxious to maintain maximum delivery flexibility. This would permit sellers to sell 2008-2012 vintage tonnes into the market at a future date, while still satisfying the seller's obligations to the buyer by delivering a greater proportion of pre-2008 vintage tonnes under the contract. Most groups failed to achieve agreement on this issue.

2. CDM Project

One of the afternoon negotiation sessions involved a project that was being developed as a CDM project under the *Kyoto Protocol*. The project involved a multi-national pipeline company that was installing a natural gas distribution system in Bangunanu, Kenya, under contract to Bangunanu Natural Gas Distribution Company, which the multi-national pipeline company owned in partnership with the Kenyan Government. The natural gas was to be distributed to 10 medium size fish processing plants in Bangunanu, which were currently relying on coal-oil for hot water and steam heating.

The multinational pipeline company was also to operate the pipeline, and was offering to sell the direct emission reductions resulting from its fish plant customers switching from coal-oil to natural gas. The buyer was a large Canadian energy company looking to apply the reductions against its emissions in Canada.

a. *Commodity*

The term sheet described the transaction as being a purchase and sale of emission reductions. Most of the groups discussed whether the commodity being bought and sold was emission reductions or CERs (the commodity established by the *Kyoto Protocol* for CDM Projects), but only a few groups discussed whether the commodity was intended to yield benefits which the buyer could use in a Canadian domestic regulatory regime. Of these groups, all agreed that the buyer's ability to make use of CERs within its domestic regulatory regime was completely beyond the seller's control and so the seller refused to bear this risk. Perhaps those buyers who did not raise this issue felt confident that CERs would continue to have value on the international market where the CERs could be resold, even if the buyer could not use them for compliance purposes in a domestic regulatory regime.

A majority of the seller groups insisted that the commodity being offered for sale was emission reductions, not CERs, while the buyer groups showed a strong preference for CERs. This was clearly a question of who was willing to take on the risk associated with qualifying the project pursuant to the CDM procedural requirements and at what price. If only emission reductions were to be delivered, the buyer would essentially be responsible for qualifying them as CERs. If CERs were to be delivered, the seller would likely be responsible for qualifying them.

b. *Title / Ownership*

Most of the groups assessed the strength of the seller's interest in the emissions reductions and identified several other possible claimants, as was done in the landfill gas negotiation session.

Some of the other possible claimants included Bangunanu Natural Gas Distribution Company (in which the seller only had a partial stake), the producer of the natural gas being sold and distributed to the fish plants, the fish plant owners and operators, owners of the land through which the pipeline would pass, and the developers and manufacturers of the technology and equipment being used in the project.

Most of the groups agreed that one way to manage these ownership risks was to have all possible claimants settle any ownership questions in an agreement. Not surprisingly, must buyers thought the seller should have the responsibility for obtaining this agreement at its own cost. Some of the seller groups countered by taking the position that the prices set out on the term sheet were already discounted to reflect this ownership risk and would have to be increased if any such additional assurances were required. For many groups, this became a matter of giving the responsibility to the party best able to obtain these assurances in the most cost effective manner and then adjusting the emission reduction prices accordingly.

c. *Verification*

Most of the groups agreed that a qualified independent verifier should be used. Some of the groups also discussed the need to provide the verifier with access to the fish plants and related emissions information in order to verify the emission reductions.

For most groups, the question of who should pay the verification costs became a question of whether or not the prices on the term sheet included these costs.

d. *Force Majeure*

Most groups were unable to agree on a force majeure provision.

Many of the seller groups wanted a provision that would cover all circumstances not within the seller's control but the buyer groups were unwilling to assume those risks. Some of the risks that would have passed to the buyer with such a broadly worded force majeure provision included political, regulatory and market risks.

Only one group of buyers and sellers were able to agree on a force majeure provision, which covered only acts of God (e.g. earthquakes, fire, etc.). At least one group of buyers refused to even consider the inclusion of a force majeure provision and was willing to pay a premium in return for the seller assuming this additional risk.

e. *International Requirements*

Most of the groups discussed at great length the responsibility and cost of traversing the CDM project cycle, with the end result being the issuance of CERs. The groups took a variety of approaches in dealing with these issues.

One of the buyer groups took the extreme position that it was only interested in buying CERs, even without regard to source, and saw no point is discussing any project specific issues. This buyer was willing to pay the seller a premium for taking on all responsibilities and assuming all risks associated with securing CERs for delivery to the buyer.

Many of the groups looked at ways to create value by allocating responsibilities based on who was best able to carry out the required task in the most cost effective manner, with both buyers and sellers assuming some of the risk of qualifying the emission reductions as CERs. For example, most groups agreed that the seller should take on responsibility for obtaining the Kenyan Government's approval of the Project. Some groups made this approval a condition precedent to the purchase agreement.

3. Domestic Agriculture Project

The final afternoon negotiation session involved an agricultural carbon sink transaction. The seller was a Canadian agriculture commodity marketing board that had encouraged a group of its

member farmers to work collectively to sequester GHG and reduce GHG emissions by various means, including:

- No-till or low till conservation crop management
- Grassland preservation and afforestation management
- Land conservation
- Abatement from animal waste and storage handling systems

The marketing board offered to sell the resulting CO2e emission reductions and/or removals to a large Canadian energy company.

a. *Title / Ownership*

Many of the same ownership issues that were addressed during the two other sessions were raised and discussed briefly during this session as well. In particular, buyers were concerned with whether the marketing board had the right to sell the benefits from the emissions reductions and removals being carried out by the board's member farmers, and not by the board itself. Most buyers suggested an agreement resolving ownership issues with each participating farmer would be required, but no clear resolution of this issue was achieved.

b. *Surplus / Vintage / Permanence*

For purposes of this negotiation, most groups spent the majority of their time discussing a combination of issues associated with surplus, vintage and permanence.

At the heart of the matter was a general reluctance on the part of the seller to accept responsibility for any sequestered GHG in perpetuity. It was generally accepted that if sellers agreed to sequester GHG, future regulation of the agriculture industry may restrict the sellers' ability to later release the sequestered GHG. Instead, sellers were keen on offering a service more akin to a lease arrangement, where they would agree to "store" a specified quantity of GHG for a period of time. On expiry, the sellers would be able to release the sequestered GHG and the buyers would once again accept responsibility for them, unless the buyers negotiated a new arrangement with the sellers to keep the GHG in question sequestered.

The seller's reasoning behind this position was twofold. First, accepting long term responsibility for the sequestered GHG meant that the kinds of operations which could be carried out on the seller's farm land would be restricted to those kinds of activities (like low till or no till farming) that would keep GHG sequestered in the soil. This could result in a decrease to the market value of the seller's farm land because of these land use restrictions. Second, sellers, in general, felt there was a reasonable possibility that farm operations would be regulated in the future to limit GHG emissions. In that event, most sellers wanted the flexibility of using these very same carbon sequestering activities to reduce their emissions in order to comply with new GHG

emission limits. A long term agreement with the buyer which would obligate the seller to maintain the sequestration of the GHG sold to the buyer, would prevent the seller from making use of its own sequestration options for its own compliance obligations.

From the buyer's perspective, the seller's position provided little comfort. At best, it was a short term solution to an emission problem. While the buyer may be able to demonstrate that on a net basis it had reduced its emissions during the term of the "lease" with the help of the seller's sequestered GHG, the buyer would end up having to deal with its own emissions and those associated with the release of all of the sequestered GHG at the end of the "lease" term. This posed a significant risk for the buyer given the possibility that it may be significantly more expensive for the buyer to replace the necessary emission reductions or GHG removals at the end of the lease term, than would be required for the buyer to buy more permanent emission reductions or GHG removals at present.

One group sought to try and resolve the issue by tying the price of a renewal "lease", after expiry of the initial term, to a discount from the then current market price of emission reductions. From the buyer's perspective, this could only work if the "lease" could be renewed at this price at the buyer's option. That would provide the buyer with some comfort that it could always renew its "lease" and achieve long term GHG storage at market prices. The Seller was, however, still reluctant to give the buyer the right to renew. The seller was generally prepared to accept the method for calculating price, but would only agree to this solution if the "lease" renewal was mutually agreed to by both buyer and seller. This unfortunately left the buyer in the same position of having no certainty as to the long term cost of dealing with the emissions which the seller's sequestered GHG was intended to offset. This group did not achieve resolution of this issue.

A second group approached the issue from a different perspective. In essence, the seller is trying to achieve two things. First, the seller is looking to free itself from any land use restrictions associated with GHG sequestration activities (like low till or no till farming) after a period of time. Second, the seller is looking to free itself of its sequestration obligations to the buyer in order to mitigate the risk of future GHG emission regulations in the agriculture industry. In that way, the seller could use its sequestration options for its own compliance obligations. The seller, however, need not accomplish these two objectives by returning responsibility and liability for the GHG sequestered on behalf of the buyer to the buyer after a period of time. Rather, the seller could go out and option its own GHG emission reductions or removals, with vintages more in line with the time period when the seller believes GHG emission regulations may be imposed on the agriculture sector.

In this way, the seller can commit to sequester GHG in perpetuity to the buyer, while still retaining its ability to ultimately release the GHG it sequesters on the buyer's behalf. The seller need only purchase its own option to purchase emission reductions or removals in the future, whether from the buyer or some other party. Then, if the seller determines in the future that it must release its sequestered GHG, either to ease land use restrictions or in order to take advantage of sequestration options for its own compliance purposes, the seller could exercise and

take delivery of the emission reductions it optioned independently to offset the emissions associated with the release of the sequestered GHG. While some of the details of this plan were left unsettled, both buyers and sellers seemed relatively confident that it set out the foundations of a workable solution to these issues.

D. Conclusion

In conclusion, the workshop achieved its goals. Participants had an opportunity to learn about and actually negotiate many of the key issues which arise in the course of a GHG emission reduction trade.

Significant progress was also made in identifying workable solutions for some of the issues – solutions which worked for both buyers and sellers. Yet, with other issues, little more than an impasse was achieved. Obviously more work needs to be done before standard terms evolve, and a robust market can develop. With much of the devil still being in the details, actual experience – by parties in the market completing real GHG emission reduction trades – will be vital to the continued development of this market.

Fasken Martineau, a Canadian law firm, has been doing climate change related legal work since 1997. Its lawyers have developed emission reduction trading contracts and negotiated both domestic and international emission reduction trades. For further information, please contact:

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SCHEDULE "A"

Climate Change Central Mock Negotiation
Project Description – Morning Session

Landfill Gas Offset Project

Landfills are sources of GHGs resulting from the anaerobic decomposition of organic waste. When organic material in landfills decomposes in the absence of oxygen, methane gas is produced. Methane gas (CH4) is a recognized GHG. Combustion of methane through its utilization as a fuel results in its conversion to carbon dioxide (CO2), thereby creating a net reduction in the amount of GHG carbon dioxide equivalents (CO2e) being released to the atmosphere.

Trade Description	Seller offers to sell CO_2eq emission reductions (ERs).
Action Taken	Canadian private landfill operator installs capital equipment to capture and dry landfill gas (LFG) that was previously vented to atmosphere. Landfill is located near a pulp mill that uses a significant quantity of pipeline gas for drying. The landfill operator builds a 1 kilometre pipeline to the pulp mill and is selling the landfill gas to the pulp mill for use in its drying process. The emission reductions are generated from the installation of the LFG capture and drying capital equipment.
Seller	Landfills-R-Us Ltd., Northerntown, Alberta. It is reasonable to estimate that capital additions will result in a process change that yields 100,000 tonnes CO2e per year for 10 years. The seller is offering half of these potential tonnes to the buyer, or 50,000 vintage 2002 through 2012 tonnes CO2e. The seller offers to deliver at least 25,000 tonnes of every vintage and no more than 100,000 tonnes of any vintage.
Buyer	White Brite Pulp Mill who is buying the landfill gas and also wants to buy the ERs that result from landfill gas no longer being vented to atmosphere.
Project Specific Considerations	
Changing Global Warming Potential (GWP) of methane	LFG is composed of a mixture of gases the greatest concentration of constituent gases of which are usually carbon dioxide and methane. The GWP of methane has fluctuated over time (1 tonne CH4 = 21-25 tonnes CO2e). The most recent IPCC issued standard is 23 tonnes CO2e.
Canadian National GHG Inventory	The Canadian National GHG Inventory currently does not account for GHG emissions from landfills.

Climate Change Central Mock Negotiation
Project Description – Morning Session

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Principal Terms

General Principles	The purpose of this term sheet is to set the framework for the development of a severable GHG commodity. The Term Sheet has not been written to include rights on corporate equity. Participants may choose to debate the merits of the inclusion of equity rights as part of their negotiations.
Criteria	All emission reductions must meet the following basic criteria: - Real: A reduction of actual emissions resulting from a specific and identifiable action or undertaking. - Measurable: The actual level of emissions and emission reductions can be quantified. - Surplus: A reduction that, at the delivery date, is not otherwise required by law. - Verifiable: The calculation methodology is acceptable, transparent, and replicable. Raw data must be available to verify/audit calculations. - Owned: The ownership of the emission reductions must be clearly defined and not in dispute. Must also satisfy schedule outlining specific actions to create GHG emission reductions, the general location of actions, and the general procedures for estimating, measuring, verifying and reporting emission reductions arising from these actions.
Price and Delivery Schedule	*OPTION PREMIUM* Premium will be paid upon completion of Agreement $0.20 per tonne CO2e

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<tr><td></td><td>Delivery Price paid in January of the year following the vintage year, when emission reductions are transferred from seller to buyer.
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<tr><td>Transfer & Delivery</td><td>Emission reductions created by the seller and sold to the buyer will be transferred no later than January 31 of each year following the vintage year. Delivery entails a creation and verification report as well as a transfer certificate.</td></tr>
</table>

[2] Average annual delivery over term of the agreement. Please note that seller has minimum obligation to deliver 25,000 tonnes of any one vintage and no more than 100,000 tonnes of any one vintage.

Verification and Reporting	Detailed protocols for estimating, auditing and reporting emission reductions will be developed and included as a schedule to this Agreement. All emission reductions to be transferred by the seller must be verified by a third party. Third party and payment will be mutually agreed upon prior to the completion of the Agreement. Changes to the identity of the third party must be approved by both buyer and seller and must be in writing.
Failure to Deliver	If the seller fails to deliver the full amount of tonnes of emission reductions the buyer has any one of the following remedies: - Entitlement to liquidated damages necessary to compensate the buyer to acquire an alternative supply of emission reductions of a similar quality. - Require the seller to find an alternative supply of emission reductions of a similar quality at their own cost.
Failure to Accept Delivery	After the buyer exercises option, if buyer refuses to accept delivery or refuses to pay the seller for delivery at any time during 2003-2012, the seller is entitled to one of the following remedies: - Entitlement to liquidated damages necessary to compensate the seller for delivery of the firm tonnes to an alternative buyer of emission reductions of a similar quality.

SCHEDULE "B"

Climate Change Central Mock Negotiation
Project Description – Afternoon Session 1

CDM Project

If a buyer and seller are located in different countries, issues arise pertaining to the eligibility of reductions under the Kyoto Protocol. The Clean Development Mechanism (CDM) is given life by Article 12 of the Kyoto Protocol. It pertains to project-based GHG reduction activities in developing countries.

Developed country investors (parties to Annex 1 under the Kyoto Protocol) investing in CDM projects can create certified emission reductions (CERs) equal to the volume of GHG reductions resulting from the CDM project. However, CERs are subject to eligibility criteria including:

- Additionality as defined in the Kyoto Protocol – "additional to those that otherwise would occur" in the absence of the project
- As yet to be determined developing (host) country requirements
- The CDM adaptation charge (levy to offset climate change adaptation costs in vulnerable countries – to be set and administered by the CDM Executive Board)

Trade Description	Seller offers to sell CO_2 equivalent (CO_2e) emission reductions (ERs).
Action Taken	A multi-national pipeline company is installing a natural gas distribution system in Bangunanu, Kenya. This company will operate the distribution system and it owns 50 percent of the Bangunanu Natural Gas Distribution Company in partnership with the state owned petroleum company. The natural gas will be distributed to 10 medium size fish processing facilities in Bangunanu, who currently rely on coal-oil for hot water and steam heating.
Seller	Roundpipe, Inc., a Canadian multinational pipeline company. It is offering the direct emission reductions that will result from its customers' fuel-switching from coal-oil to natural gas.
Buyer	Enerex Corporation, Ltd., a large Canadian energy company that wishes to purchase emission reductions internationally and apply them against their direct emissions in Canada.
Project Specific Considerations	
Host Country Approval	Will Kenya allow the export of GHG emission reductions and what conditions might be applied?

Canadian Government Approval	Will the Canadian government accept these tonnes from a Canadian corporation looking to meet its domestic compliance obligations?

Climate Change Central Mock Negotiation
Term Sheet – Afternoon Session 1

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Principal Terms

General Principles	The purpose of this term sheet is to set the framework for the development of a severable GHG commodity. The Term Sheet has not been written to include rights on corporate equity. Participants may choose to debate the merits of the inclusion of equity rights as part of their negotiations.
Criteria	All emission reductions must meet the following basic criteria: - Real: A reduction of actual emissions resulting from a specific and identifiable action or undertaking. - Measurable: The actual level of emissions and emission reductions can be quantified. - Surplus: A reduction that, at the delivery date, is not otherwise required by law. - Verifiable: The calculation methodology is acceptable, transparent, and replicable. Raw data must be available to verify/audit calculations. - Owned: The ownership of the emission reductions must be clearly defined and not in dispute. Must also satisfy schedule outlining specific actions to create GHG emission reductions, the general location of actions, and the general procedures for estimating, measuring, verifying and reporting emission reductions arising from these actions.
Host Country Approval	Buyer and seller must agree who will seek, and perhaps guarantee, host country approval.
CDM Adaptation Charge	Buyer and seller must agree to pay CDM related administration charges.

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[1] Average annual delivery over term of the agreement. Please note that seller has minimum obligation to deliver 25,000 tonnes of any one vintage and no more than 100,000 tonnes of any one vintage.

Verification and Reporting	Detailed protocols for estimating, auditing and reporting emission reductions will be developed and included as a schedule to this Agreement. All emission reductions to be transferred by the seller must be verified by a third party. Third party and payment will be mutually agreed upon prior to the completion of the Agreement. Changes to the identity of the third party must be approved by both buyer and seller and must be in writing.
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Failure to Accept Delivery	After the buyer exercises option, if buyer refuses to accept delivery or refuses to pay the seller for delivery at any time during 2003-2012, the seller is entitled to one of the following remedies: - Entitlement to liquidated damages necessary to compensate the seller for delivery of the firm tonnes to an alternative buyer of emission reductions of a similar quality.

SCHEDULE "C"

Climate Change Central Mock Negotiation
Project Description – Afternoon Session 2

Domestic Agricultural Project

The agricultural sector is the third largest emitter of GHGs. Given the potential for carbon soil sink enhancement, it could be an important source of either emission reductions or removals. In principal, a removal is created when a farmer *implements* a new management practice that results in the incremental removal of a tonne of GHG from the atmosphere. For example, an emissions removal could be created when a farmer changes from intensive to low/no till practices. Conversely, a reduction occurs when a farmer changes a practice or installs new capital that results in fewer GHGs being emitted to the atmosphere. For example, if a farmer changes the feed of his cattle such that there is a reduction in rumenant methane.

Trade Description	Seller offers to sell CO_2 equivalent (CO_2e) emission reductions and/or removals (ERs).
Action Taken	An agricultural commodity marketing board has encouraged a group of its farming members to work collectively to offer GHG reductions and removals to a buyer. The practices that are to be changed, measured and monitored include: • No-till or low till conservation crop management, • Grassland preservation and afforestation management, • Land conservation • Abatement from animal waste and storage handling systems.
Seller	Multigrain Commodity Board, a Canadian agricultural commodity marketing board.
Buyer	Enerex Corporation, a large Canadian energy company.
Project Specific Considerations	
Changing Global Warming Potential (GWP) of methane	The GWP of methane has fluctuated over time (1 tonne CH4 = 21-25 tonnes CO2e). The most recent IPCC issued standard is 1 tonne CH4 = 23 tonnes CO2e. The GWP of N2O, as specified by the IPCC, is 1 tonne N2O = 210 tonnes CO2e.

Climate Change Central Mock Negotiation
Term Sheet – Afternoon Session 2

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Principal Terms

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